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TITLE: METHOD FOR MEASURING GAP  
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## ABSTRACT:

PURPOSE: To enable the gap confronting between a mask and a wafer to be measured precisely by arranging a contactless distance measuring device facing the mask, measuring the distance to the mask at the part where the picture pattern of the mask is formed and the distance to the wafer at the part where the picture pattern is not formed, respectively.

CONSTITUTION: The wafer 2 is fixed and held on the top surface of a table 1

by vacuum sucking and the like. An exposing mask 11 is held over the table 1 by a holder 12. The mask 11 comprises a polyimide film 13 on which the picture pattern 15 of Au and transparent part 16 are formed. The distance measuring device 17 is arranged over the mask. By using a sensor 17a, the distance  $l_{1}</SB>-l_{2}</SB>$  to the part 15 of the mask where the picture pattern is formed and the distance  $l_{1}</SB>-l_{2}</SB>$  to the wafer through the transparent part 16 of the mask where the picture pattern is not formed are measured. The opposing gap between the wafer and the mask is computed by  $l_{1}</SB>-l_{2}</SB>$ . In this method the opposing gap between the wafer and the mask can be measured without contact highly precisely, and the picture pattern of the mask can be copied on the wafer.

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